

Claims

- [c1] 1. A tracking system to track the location of a plurality of assets of interest, said tracking system comprising:
a set of asset badges, wherein each of said set of asset badges is attached to a corresponding one of a first set of assets and transmits a corresponding badge identifier;
a plurality of intelligent badges, wherein each of said plurality of intelligent badges is attached to a corresponding one of a second set of assets and transmits a corresponding badge identifier, wherein said first set of assets and said second set of assets are comprised in said plurality of assets;
each of said plurality of intelligent badges receiving a corresponding one of a plurality of sets of badge identifiers, each of said plurality of intelligent badges sending said corresponding one of a plurality of sets of badge identifiers associated with a badge identifier of the intelligent badge; and
a processing system receiving and processing said plurality of sets of badge identifiers and corresponding identifiers of said intelligent badges to determine a relative location of each of said plurality of assets of interest.

[c2] 2. The tracking system of claim 1, further comprising a reader receiving each of said plurality of sets of badge identifiers and said associated badge identifier from a corresponding one of said plurality of intelligent badges, said reader sending said plurality of sets of badge identifiers and said associated badge identifiers to said processing system.

[c3] 3. The tracking system of claim 2, wherein a first set of badge identifiers and a second set of badge identifiers contain at least one common badge identifier, wherein said processing system determines said relative location by identifying said at least one common badge identifier, wherein said first set and said second set are comprised in said plurality of sets of badge identifiers.

[c4] 4. The tracking system of claim 3, further comprising a reference badge positioned at a known location in an area where said plurality of assets are located, wherein said reference badge also transmits a reference badge identifier, wherein a first intelligent badge contained in said plurality of intelligent badges receives said reference badge identifier and sends said reference badge identifier to said processing system via said reader, wherein said processing system determines the location of each of said plurality of assets relative to said known location.

[c5] 5. The tracking system of claim 4, wherein each of said set of asset badges sends the corresponding identifier in both a radio-frequency (RF) signal and an infrared (IR) signal, wherein the identifier encoded in said RF signal is received by said reader and the identifier encoded in said IR signal is received by one or more of said plurality of intelligent badges.

[c6] 6. The tracking system of claim 3, further comprising:
a set of component badges, wherein said set of component badges are attached to corresponding one of a fourth set of assets; and
a set of active badges, wherein each of said set of active badges is attached to a corresponding one of a third set of assets, wherein said third set of assets and said fourth set of assets are contained in said plurality of assets, wherein a first active badge receives each of a set of component badge identifiers from a corresponding one of said set of component badges, wherein said set of component badge identifiers and a first active badge identifier is sent by said first active badge to one of said plurality of intelligent badges, wherein said first active badge identifier identifies said first active badge and said first active badge is contained in said set of active badges,
wherein said processing system receives said first active

badge identifier associated with a set of badge identifiers, said processing system determining the relative location of said first active badge similar to said determining of location of said plurality of assets, wherein the approximate location of each of said fourth set of assets is same as the relative location of said first active badge.

[c7] 7. The tracking system of claim 2, wherein each of said plurality of sets of badge identifiers comprises the identifier of one of said intelligent badge or said plurality of asset badges.

[c8] 8. The tracking system of claim 2, wherein an intelligent badge is attached to each of said plurality of assets of interest such that said relative location is determined with more precision.

[c9] 9. A computer readable medium carrying one or more sequences of instructions for causing a processing system to determine a relative location of each of a plurality of assets, wherein each of a set of asset badges is attached to a corresponding one of a set of assets, wherein each of a plurality of intelligent badges is attached to a corresponding asset, wherein said corresponding asset and said set of assets are comprised in said plurality of assets, each of said plurality of intelligent badges receiving a corresponding one of a plurality of sets of badge

identifiers, each of said plurality of intelligent badges sending said corresponding one of a plurality of sets of badge identifiers associated with a badge identifier of the intelligent badge, wherein execution of said one or more sequences of instructions by one or more processors contained in said processing system causes said one or more processors to perform the actions of: receiving said plurality of sets of badge identifiers and corresponding identifiers of said plurality of intelligent badges; and examining said plurality of sets of badge identifiers and corresponding identifiers of said plurality of intelligent badges to determine said relative location of each of said plurality of assets of interest.

[c10] 10. The computer readable medium of claim 9, wherein a first set of badge identifiers and a second set of badge identifiers contain at least one common badge identifier, wherein said processing system determines said relative location by identifying said at least one common badge identifier, wherein said first set and said second set are comprised in said plurality of sets of badge identifiers.

[c11] 11. A method of tracking the location of a plurality of assets of interest, said method comprising: attaching each of a set of asset badges to a corresponding one of a first set of assets, wherein each of said set

of asset badges transmits a corresponding badge identifier;

attaching each of a plurality of intelligent badges to a corresponding one of a second set of assets, wherein each of said plurality of intelligent badges also transmits a corresponding badge identifier, wherein said first set of assets and said second set of assets are comprised in said plurality of assets;

receiving each of a plurality of sets of badge identifiers in a corresponding one of said plurality of intelligent badges;

transmitting from each intelligent badge a corresponding one of said plurality of sets of badge identifiers along with a badge identifier of the intelligent badge; and

processing in a processing system said plurality of sets of badge identifiers and corresponding identifiers of said intelligent badges to determine a relative location of each of said plurality of assets of interest.

- [c12] 12. The method of claim 11, wherein a first set of badge identifiers and a second set of badge identifiers contain at least one common badge identifier, wherein said processing determines said relative location by identifying said at least one common badge identifier, wherein said first set and said second set are comprised in said plurality of sets of badge identifiers.

[c13] 13. The method of claim 12, further comprising positioning a reference badge at a known location in an area where said plurality of assets are located, wherein said reference badge also transmits a reference badge identifier, wherein a first intelligent badge contained in said plurality of intelligent badges receives said reference badge identifier and sends said reference badge identifier, wherein said processing determines the location of each of said plurality of assets relative to said known location.

[c14] 14. The method of claim 11, further comprising: attaching each of a set of component badges to a corresponding one of a fourth set of assets; and a set of active badges, wherein each of said set of active badges is attached to a corresponding one of a third set of assets, wherein said third set of assets and said fourth set of assets are contained in said plurality of assets, wherein a first active badge receives each of a set of component badge identifiers from a corresponding one of said set of component badges, wherein said set of component badge identifiers and a first active badge identifier is sent by said first active badge to one of said plurality of intelligent badges, wherein said first active badge identifier identifies said first active badge and said first active badge is contained in said set of active

badges,

wherein said processing system receives said first active badge identifier associated with a set of badge identifiers, said processing system determining the relative location of said first active badge similar to said determining of location of said plurality of assets, wherein the approximate location of each of said fourth set of assets is same as the relative location of said first active badge.

[c15] 15. The method of claim 11, further comprising receiving in a reader each of said plurality of sets of badge identifiers and said associated badge identifier from a corresponding one of said plurality of intelligent badges, wherein said reader sends said plurality of set of badge identifier to said processing system.